M 961
13.06.00

2-PORT BALANCES PRESSURE THREADED PN 25 (5 ... 150 °C) SEAT VALVES

VM 2.. Eng.

- **Body in RG5 bronze**
- **Spindle and plug in stainless steel**
- **Connections with threaded unions ISO 228/1**
- **Equipercentage control; control ratio 50: 1**
- **Leakage rate: 0.05% Kvs**

CE

1. APPLICATION

The VM 2.. valves in bronze are used for closing the hot or superheated water flow in heating or district heating sites. They are operated by CLQ/CEQ 07.. or CLR/CER 15../03.. linear actuators
Permitted fluid:
– Superheated hot water max. 150 °C

2. OPERATION

The closing element of the valve is an appropriately-machined plug which, operated by the linear movement of the actuator, blocks the water flow. The plug run varies between 5... 10 mm according to the diameter (see table).
Control: equipercentage.

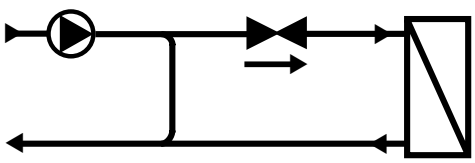
3. MODELS

Code	DN body mm	DN valve connect.s	DN pipe connect.s	Kvs(1) m³/h	Run mm	Suitable actuators CLQ / CEQ 07.. 14 s./mm		CLR / CER 15.. 15 s./mm		CLR / CER 03.. 3 s./mm	
		male	male			bar (2)	sec (3)	bar (2)	sec (3)	bar (2)	sec (3)
VM 209	15	3/4"	1/2"	0.25	5	16	70	16	75	16	15
VM 210	15	3/4"	1/2"	0.4	5	16	70	16	75	16	15
VM 211	15	3/4"	1/2"	0.63	5	16	70	16	75	16	15
VM 212	15	3/4"	1/2"	1.0	5	16	70	16	75	16	15
VM 213	15	3/4"	1/2"	1.6	5	16	70	16	75	16	15
VM 214	15	3/4"	1/2"	2.5	5	16	70	16	75	16	15
VM 219	20	1"	3/4"	4.0	5	16	70	16	75	16	15
VM 224	25	1"1/4	1"	6.3	5	16	70	16	75	16	15
VM 230	32	1"1/2	1"1/4	10.0	7	–	–	16	105	16	21
VM 239	40	2"	1"1/2	16.0	10	–	–	16	150	16	30
VM 248	50	2"1/2	2"	25.0	10	–	–	16	150	16	30

(1) : Kvs – Flow coefficient : flow in m³/h with open valve and pressure drop of 100 kPa. 100 kPa = 10 mWG = 1 bar
(2) : bar – Maximum pressure differential Δp max. permitted by actuator.
(3) : sec – Time necessary for actuator to make a complete run of the valve.

4. FUNCTIONAL DIAGRAM

District heating sites closing

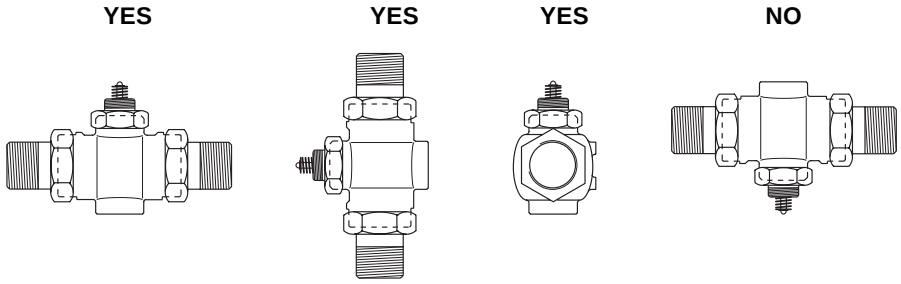


5. TECHNICAL DATA

Valve body	RG5 bronze	Run	5 ...10 mm
Spindle and plug	stainless steel	Control feature	equipercentage
Spindle seals	O-Ring	Control ratio	50:1
Nominal pressure	25 bar (,500 kPa)	Leakage rate	0.05% Kvs
Fluid temperature	5 ...150 °C	Connections	threaded male unions (ISO 228/1)

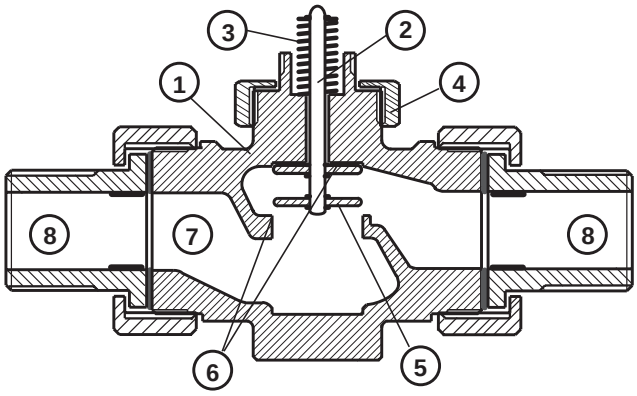
6. MOUNTING

Before mounting the valve ensure that in the pipework there is no extraneous matter such as residues from welding or threading. The pipework must not be subject to vibrations and must be perfectly aligned with the valve connections to avoid dangerous strains which could damage the valve. During installation pay special attention to the direction of the flow, embossed on the valve body, in relation to the hydraulic circuit controlled.
The valve can be installed in any position but with the spindle pointed downwards. When installing make sure you leave enough space for the mounting of the actuator on the spindle side.



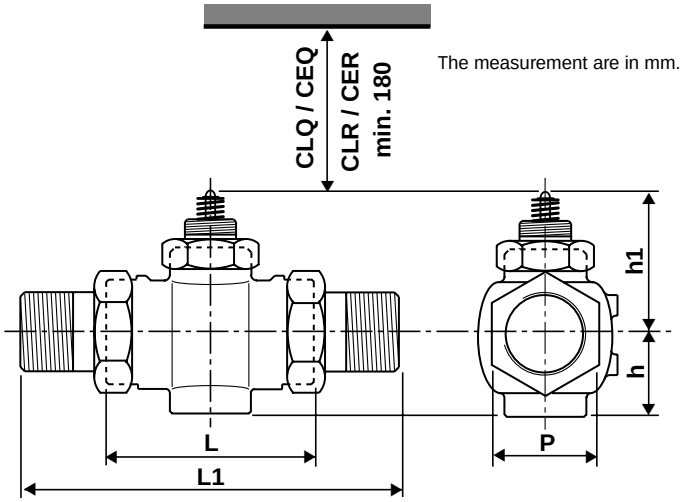
7. CONSTRUCTION

The valve body is made of RG5 bronze, the spindle and plug are in stainless steel.
The spindle is rendered watertight by O-Rings in teflon held between cleaning rings in teflon. The whole thing is enclosed in a sealing block which is easily replaceable.
The spring return is fixed to the spindle externally, above the sealing block. At the top of the valve there is the thread that allows the mounting of the actuator (CLQ/CEQ - CLR/CER).
The valves come with threaded male unions with seals.



1 – Valve body
2 – Spindle
3 – Spring return
4 – Sealing block
5 – Plug
6 – Seat
7 – Fluid entrance
8 – Unions

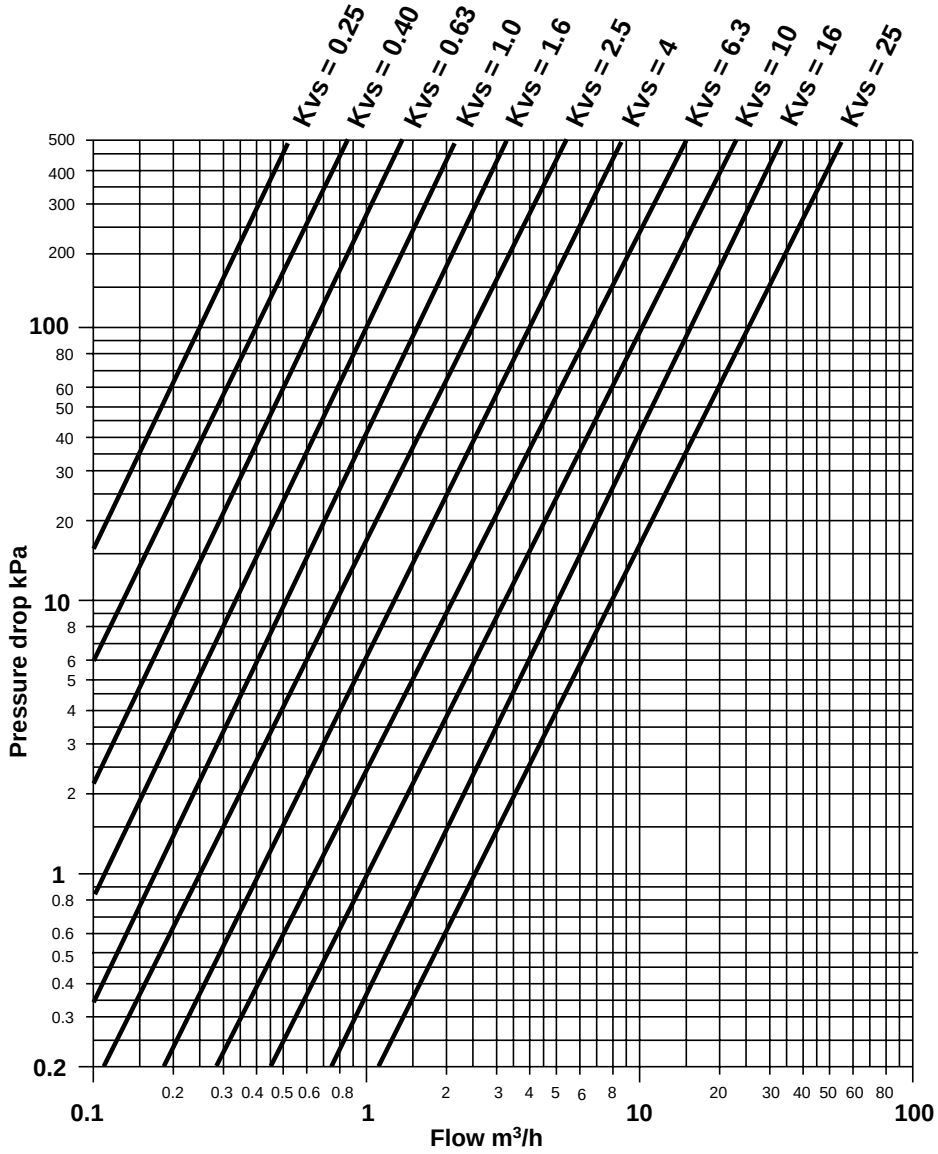
8.OVERALL DIMENSIONS



The measurement are in mm.

Model	L	L1	h	h1	P
VM 209	65	131	33	70	30
VM 210	65	131	33	70	30
VM 211	65	131	33	70	30
VM 212	65	131	33	70	30
VM 213	65	131	33	70	30
VM 214	65	131	33	70	30
VM 219	70	142	33	70	36
VM 224	75	159	38	70	46
VM 230	100	191	38	70	55
VM 239	110	196	38	88	65
VM 248	130	258	44	88	82

9.PRESSURE DROP



Kvs = Flow coefficient : Flow in m^3/h with open valve and pressure drop of 100 kPa.
100 kPa = 10 mWG = 1 bar

COSTER
CIE
CONTROLLI
TEMPERATURA
ENERGIA

20132 Milan	Head Office & Sales
Via San G.B. De La Salle, 4/a	Tel. +39.02.2722121 (TI) Tel. +39.02.45476193 (FW) Fax +39.02.2593645
00146 Rome	Reg. Off. Central & Southern
Viale G. Marconi, 437	Tel. +39.06.5573330 Fax +39.06.5566517
25048 Edolo (BS)	Orders and Shipping
Via Gen. Treboldi 190/192	Tel. +39.0364.7732.00/02 Fax +39.0364.770016
Web: www.coster.info	E-mail: info@coster.info

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CISQ/CSQ cert.n°9115.COEE

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